# INSTRUMENTATION FOR RELATING INTERFACES AND UNITS, WRAPPING INTERFACES, HANDLING UNDOCUMENTED INTERFACES, AND DETECTING PAIR-WISE LOCATION CONSTRAINTS

## ABSTRACT OF THE INVENTION

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An automatic distributed partitioning system (ADPS) determines which unit exposes an interface in a framework in which units lack reliable identities. The ADPS detects a reference to an interface. For the interface, the ADPS assures that the unit that exposes the interface is identified. Using unit identities, the ADPS

10 performs operations such as profiling of an application or classifying units of an application. An interface wrapper for the interface stores the identity of the unit that exposes the interface, as well as information about the interface and a reference to instrumentation. When a client unit calls a member function of an interface, the interface wrapper intercepts the call and invokes the instrumentation. The

15 instrumentation performs an operation such as profiling the application or classifying a unit. The ADPS detects when an interface is undocumented, and handles undocumented interfaces without invoking the full instrumentation capabilities of the ADPS. When the ADPS detects an undocumented interface, the ADPS notes a pair-wise location constraint for the units that communicate across

20 the undocumented interface.